

**§ 74.23**

**40 CFR Ch. I (7–1–12 Edition)**

SO<sub>2</sub> Emissions Factor = (average percent of sulfur by weight) × (k),

where,

average percent of sulfur by weight

= annual average, for a combustion source submitting annual data

= monthly average, for a combustion source submitting monthly data

k = 39,000 for bituminous coal or anthracite

= 35,000 for subbituminous coal

= 30,000 for lignite

= 5,964 for distillate (light) oil

= 6,594 for residual (heavy) oil

= 0.6 for natural gas

For other fuels, the combustion source must specify the SO<sub>2</sub> emissions factor.

(c) *Annual SO<sub>2</sub> emissions calculation.*

Annual SO<sub>2</sub> Emissions for the specified calendar year, expressed in pounds, shall be calculated as follows:

(1) For a combustion source submitting monthly data,

$$\text{Annual SO}_2 \text{ Emissions} = \sum_{\text{months=Jan}}^{\text{Dec}} \sum_{\text{Fuel Types}} \left[ \begin{array}{l} \text{quantity of fuel consumed} \\ \times \text{SO}_2 \text{ emissions factor} \\ \times (1 - \text{control system efficiency}) \\ \times (1 - \text{fuel pre-treatment efficiency}) \end{array} \right]$$

(2) For a combustion source submitting annual data:

$$\text{Annual SO}_2 \text{ Emissions} = \sum_{\text{Fuel Types}} \left[ \begin{array}{l} \text{quantity of fuel consumed} \\ \times \text{SO}_2 \text{ emissions factor} \\ \times (1 - \text{control system efficiency}) \\ \times (1 - \text{fuel pre-treatment efficiency}) \end{array} \right]$$

where,

“quantity of fuel consumed” is as defined under § 74.20(a)(2)(i);

“SO<sub>2</sub> emissions factor” is as defined under paragraph (b) of this section;

“control system efficiency” is as defined under § 60.48(a) and part 60, appendix A, method 19 of this chapter, if applicable; and

“fuel pre-treatment efficiency” is as defined under § 60.48(a) and part 60, appendix A, method 19 of this chapter, if applicable.

(d) *Annual fuel consumption calculation.* Annual fuel consumption for the specified calendar year, expressed in mmBtu, shall be calculated as defined under § 74.20(b)(1) (i) or (ii).

(e) *Actual SO<sub>2</sub> emissions rate calculation.* The actual SO<sub>2</sub> emissions rate for the specified calendar year, expressed in lbs/mmBtu, shall be calculated as follows:

$$\text{Actual SO}_2 \text{ Emissions Rate} = \frac{\text{Annual SO}_2 \text{ Emissions}}{\text{Annual Fuel Consumption}}$$

[60 FR 17115, Apr. 4, 1995, as amended at 63 FR 18841, Apr. 16, 1998]

**§ 74.23 1985 Allowable SO<sub>2</sub> emissions rate.**

(a) *Data requirements.* (1) The designated representative of the combustion source shall submit the following

data and the calculations under paragraph (b) of this section based on the submitted data:

(i) Allowable SO<sub>2</sub> emissions rate of the combustion source expressed in lbs/

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mmBtu as defined under § 72.2 of this chapter for the calendar year specified in paragraph (a)(2) of this section. If the allowable SO<sub>2</sub> emissions rate is not expressed in lbs/mmBtu, the allowable

emissions rate shall be converted to lbs/mmBtu by multiplying the emissions rate by the appropriate factor as specified in Table 1 of this section.

TABLE 1—FACTORS TO CONVERT EMISSION LIMITS TO POUNDS OF SO<sub>2</sub>/MMBTU

Unit measurement	Bituminous coal	Subbituminous coal	Lignite coal	Oil
lbs Sulfur/mmBtu .....	2.0	2.0	2.0	2.0
% Sulfur in fuel .....	1.66	2.22	2.86	1.07
ppm SO <sub>2</sub> .....	0.00287	0.00384	.....	0.00167
ppm Sulfur in fuel .....	.....	.....	.....	0.00334
tons SO <sub>2</sub> /hour .....	2×8760/(annual fuel consumption for specified year <sup>1</sup> ×10 <sup>3</sup> )			
lbs SO <sub>2</sub> /hour .....	8760/(annual fuel consumption for specified year <sup>1</sup> ×10 <sup>6</sup> )			

<sup>1</sup> Annual fuel consumption as defined under § 74.20(b)(1) (i) or (ii); specified calendar year as defined under § 74.23(a)(2).

(ii) Citation of statute, regulations, and any other authority under which the allowable emissions rate under paragraph (a)(1) of this section is established as applicable to the combustion source;

(iii) Averaging time associated with the allowable emissions rate under paragraph (a)(1) of this section.

(iv) The annualization factor for the combustion source, based on the type of combustion source and the associated averaging time of the allowable emissions rate of the combustion source, as set forth in the Table 2 of this section:

TABLE 2—ANNUALIZATION FACTORS FOR SO<sub>2</sub> EMISSION RATES

Type of combustion source	Annualization factor for scrubbed unit	Annualization factor for unscrubbed unit
Unit Combusting Oil, Gas, or some combination .....	1.00	1.00
Coal Unit with Averaging Time ≤ 1 day .....	0.93	0.89
Coal Unit with Averaging Time = 1 week .....	0.97	0.92
Coal Unit with Averaging Time = 30 days .....	1.00	0.96
Coal Unit with Averaging Time = 90 days .....	1.00	1.00
Coal Unit with Averaging Time = 1 year .....	1.00	1.00
Coal Unit with Federal Limit, but Averaging Time Not Specified .....	0.93	0.89

(2) *Calendar year.* (i) For combustion sources that commenced operation prior to January 1, 1985, the calendar year for the allowable SO<sub>2</sub> emissions rate shall be 1985.

(ii) For combustion sources that commenced operation after January 1, 1985, the calendar year for the allowable SO<sub>2</sub> emissions rate shall be the first year of the three consecutive calendar years of the alternative baseline under § 74.20(b)(2).

(iii) For combustion sources meeting the requirements of § 74.20(c), the calendar year for calculating the allowable SO<sub>2</sub> emissions rate shall be the first year of the three consecutive calendar years to be used as alternative data under § 74.20(c).

(b) *1985 Allowable SO<sub>2</sub> emissions rate calculation.* The allowable SO<sub>2</sub> emissions rate for the specified calendar year shall be calculated as follows:

$$\text{1985 Allowable SO}_2 \text{ Emissions Rate} = (\text{Allowable SO}_2 \text{ Emissions Rate}) \times (\text{Annualization Factor})$$

### § 74.24 Current allowable SO<sub>2</sub> emissions rate.

The designated representative shall submit the following data:

(a) Current allowable SO<sub>2</sub> emissions rate of the combustion source, expressed in lbs/mmBtu, which shall be the most stringent federally enforceable emissions limit in effect as of the